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JERRE LEVY and R. W. SPERRY, Division of Biology, California Institute of Technology. Lateral specialization and cerebral dominance in commissurotomy patients.

Current studies of commissurotomy patients of Vogel and Bogen reveal an organizational differentiation between right and left hemispheres for perceptual and cognitive as well as for constructive and expressive functions. Evidence of interference effects between the verbal and non-verbal processing of sensory information suggests that the lateralization of language and perception into different hemispheres was an adaptive advantage which avoided a blocking of Gestalt functions that bilateral language centres would have produced. Such blocking was clearly seen in a group of people who are likely to have at least some bilateral language ability, namely sinistrals. Results of testing under lateralized and unrestricted conditions suggest that the neocommissures play a critical role in the expression of functions in which the minor hemisphere normally excels.